



CITY OF NORTHAMPTON

STORMWATER AND FLOOD CONTROL UTILITY

PRESENTATION FOR FISCAL YEARS 2015 AND 2016

DEPARTMENT OF PUBLIC WORKS



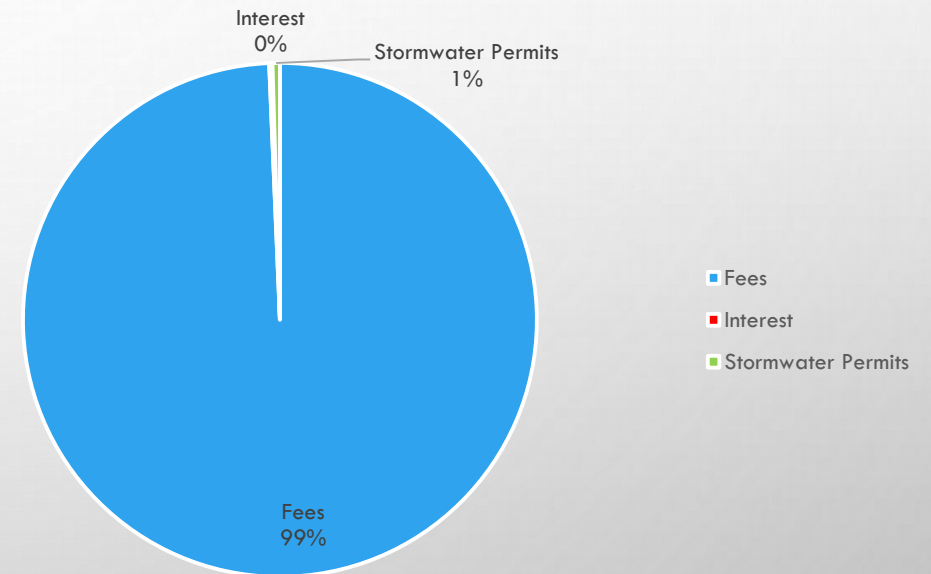
STORMWATER AND FLOOD CONTROL UTILITY

- ESTABLISHED ON MARCH 20, 2014 - CHAPTER 280 CODE OF ORDINANCES
- FIRST FISCAL YEAR OF OPERATIONS – FY2015 (JULY 1, 2014-JUNE 30, 2015)
- CHAPTER 280, SECTION 213 - REQUIRES ANNUAL PRESENTATION TO CITY COUNCIL PROVIDING INFORMATION RELATIVE TO THE WORK AND PROJECTS FINANCED BY THE UTILITY
- FY2015 PRESENTATION TO COUNCIL WAS NOT GIVEN DUE TO DPW DIRECTOR VACANCY (DECEMBER 2015 – MAY 2016)
- THIS REPRESENTS A COMBINED PRESENTATION FOR FY2015 AND FY2016

STORMWATER AND FLOOD CONTROL UTILITY FY2015 REVENUES

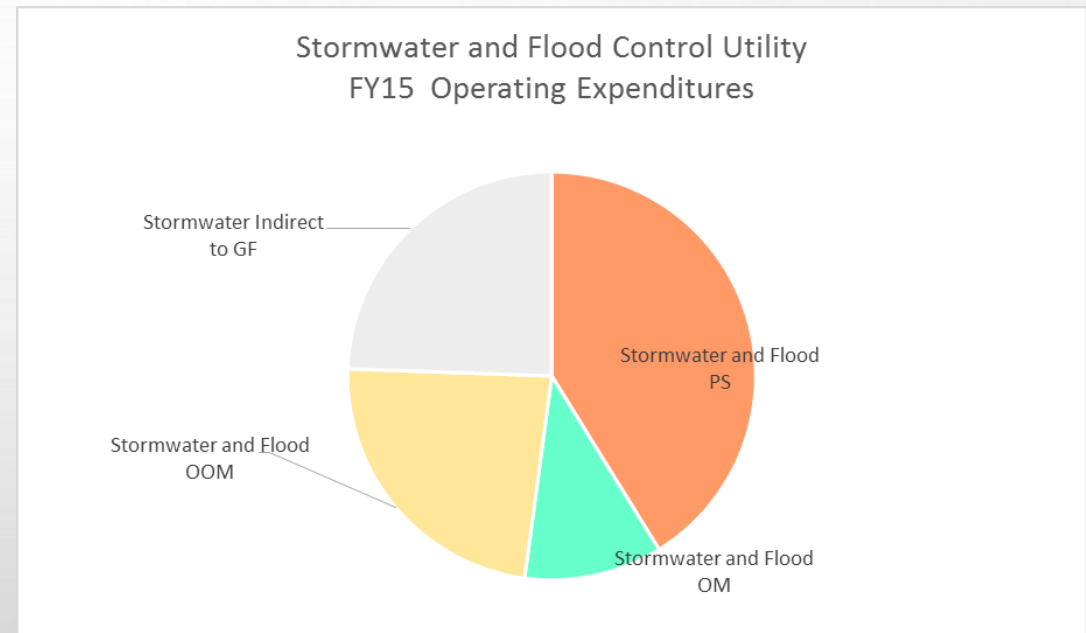
Revenue	2015
Fees	\$ 1,675,094
Interest	\$ 3,470
Stormwater Permits	\$ 7,800
Total Revenues	\$ 1,686,363

Stormwater and Flood Control Utility FY2015 Revenue



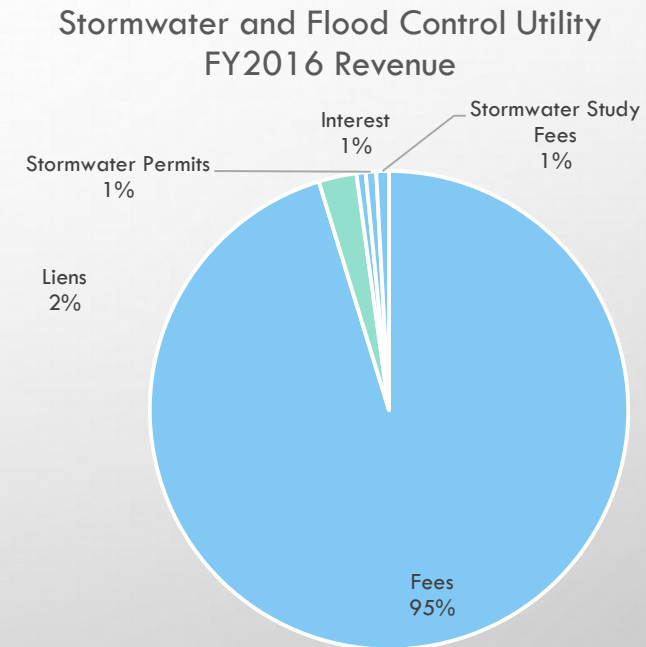
STORMWATER AND FLOOD CONTROL UTILITY FY2015 EXPENDITURES

Expenditures	2015
Stormwater and Flood PS	\$ 411,025
Stormwater and Flood OM	\$ 109,258
Stormwater and Flood OOM	\$ 233,855
Stormwater Indirect to GF	\$ 243,969
Total Expenditures	\$ 998,107



STORMWATER AND FLOOD CONTROL UTILITY FY2016 REVENUES

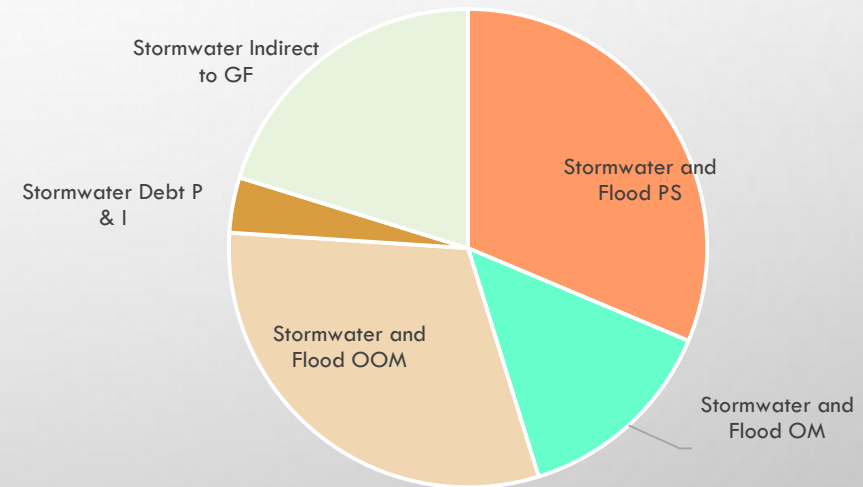
Revenue	2016
Fees	\$ 1,982,193
Liens	\$ 53,275
Interest	\$ 12,906
Stormwater Permits	\$ 14,669
Stormwater Study Fees	\$ 17,807
Total Revenues	\$ 2,080,850



STORMWATER AND FLOOD CONTROL UTILITY EXPENDITURES FY2016

Expenditures	2016
Stormwater and Flood PS	\$ 418,197
Stormwater and Flood OM	\$ 185,425
Stormwater and Flood OOM	\$ 411,193
Stormwater Debt P & I	\$ 49,824
Stormwater Indirect to GF	\$ 269,999
Total Expenditures	\$ 1,334,639

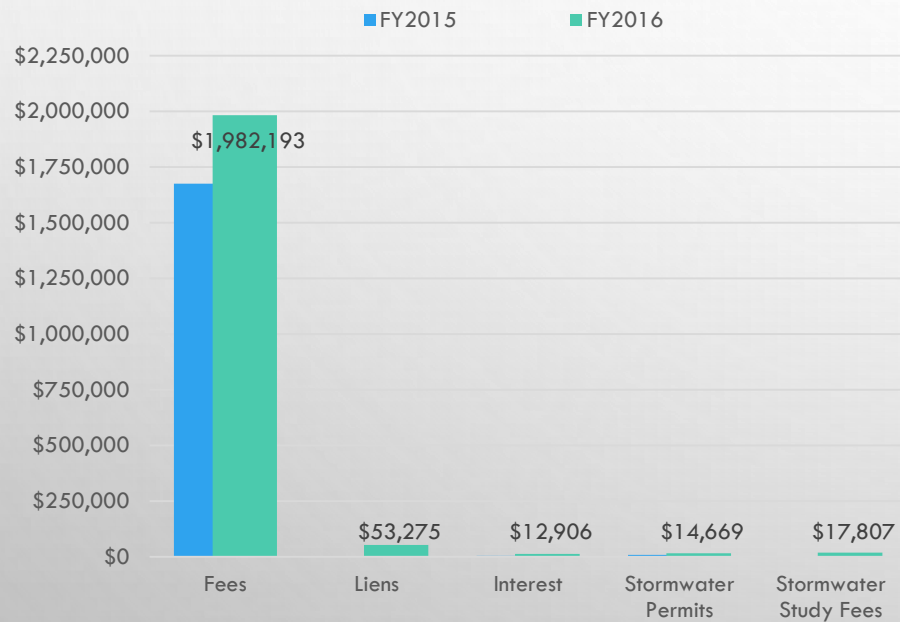
Stormwater Enterprise Fund FY16
Operating Expenditures



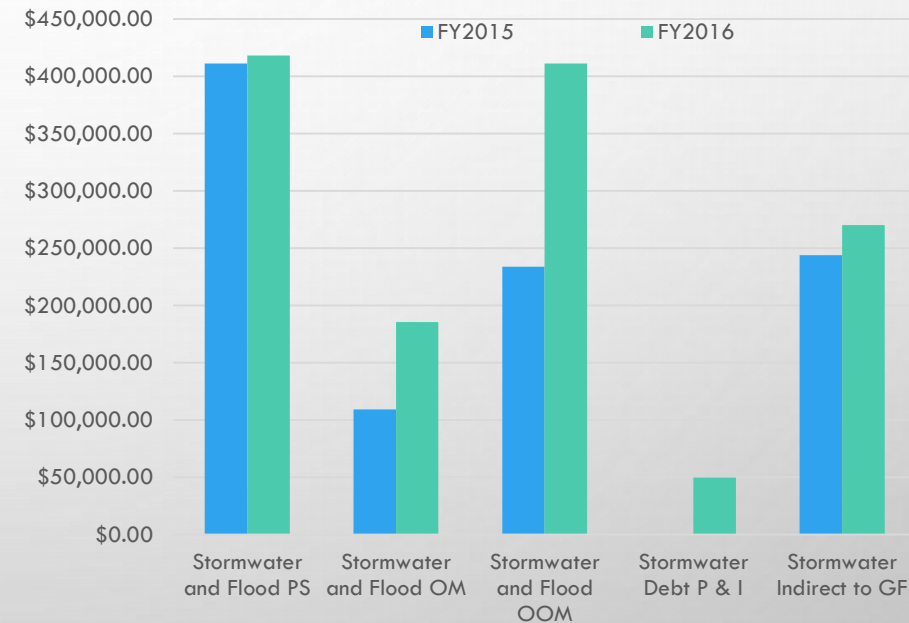
STORMWATER AND FLOOD CONTROL UTILITY FUND

REVENUE AND EXPENDITURES FOR FY2015 AND FY2016 COMPARED

Stormwater Enterprise Fund Revenues




Stormwater Enterprise Fund Expenditures





STORMWATER & FLOOD CONTROL UTILITY CREDITS

- The Stormwater and Flood Control Utility billing list includes 11,185 properties
 - Approved credits have been issued to 1,051 properties for a total annual value of \$78,449
- 

STORMWATER AND FLOOD CONTROL UTILITY PERSONNEL

THE EQUIVALENT OF 10.78 FULL-TIME POSITIONS ARE PAID OUT OF THE STORMWATER AND FLOOD CONTROL UTILITY WITH MOST POSITIONS BEING PARTIALLY FUNDED BY THE UTILITY. IN TOTAL 33 STAFF PEOPLE ARE PARTIALLY FUNDED BY THE UTILITY.



Position Description	FTE
DPW Director	0.10
Stormwater Manager	0.80
Stormwater Utility Administrator	1.00
Financial Administrator	0.25
City Engineer	0.30
Asst. Civil Engineer	0.25
Assistant Environmental Engineer	0.33
Civil Engineer Technician	0.25
GIS Coordinator	0.25
Sr. Engineer/CADD Supervisors	0.20
Field Support Technician	0.33
Highway Superintendent	0.10
Special Motor Equipment Operator	2.99
Motor Equipment Operator	0.66
Heavy Motor Equipment Operator	0.33
Working Foreman	0.86
Maintenance Foreman	0.10
Maintenance Technician	0.10
WWTP Operator	0.10
Fleet Maintenance Tech and Vehicle Insp	0.10
Motor Equipment Repair	0.20
Administration Manager	0.25
Principal Clerk	0.83
Principal Clerk	0.10
Total:	10.78

INDIRECT COSTS ASSESSED TO THE GENERAL FUND

- EMPLOYEE BENEFITS –
 - ALL EMPLOYEES WORKING FOR THE UTILITY HAVE A PRO-RATED SHARE OF THE CITY'S CONTRIBUTION TO THEIR HEALTH INSURANCE CHARGED AS AN INDIRECT.
 - OTHER PRO-RATED EMPLOYEE BENEFITS INCLUDE WORKERS COMPENSATION, MEDICARE AND RETIREMENT
- SERVICES PROVIDED BY OTHER CITY DEPARTMENTS –
 - THE UTILITY IS CHARGED FOR A PORTION OF THE COSTS RELATED TO THE TREASURER/COLLECTOR'S OFFICE, HUMAN RESOURCES, IT, LEGAL, AUDITORS OFFICE, MAYOR'S OFFICE AND CITY COUNCIL
 - THE METHODOLOGY IS INDIVIDUALLY CALCULATED FOR EACH OFFICE USING METRICS THAT ASSESS THE AMOUNT OF WORK RELATED TO THE UTILITY BEING DONE IN EACH OFFICE (SUCH AS NUMBER OF BILLS OR INVOICES PROCESSED, ETC.)
- OTHER DIRECT COSTS –
 - PRO-RATED PORTION OF GENERAL LIABILITY, PROPERTY AND VEHICLE INSURANCE
 - UNEMPLOYMENT



STORMWATER OPERATIONS & MAINTENANCE

NEW ENVIRONMENTAL PROTECTION AGENCY (EPA) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT

- Effective Date of the Permit: July 1, 2017
- Submit Notice of Intent to EPA: by September 29, 2017
- Submit 5-year Stormwater Management Plan (SWMP): by July 1, 2018

MS4 PERMIT SIX MINIMUM CONTROL MEASURES

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination (IDDE) Program
- Construction Site Stormwater Runoff Control
- Stormwater Management in New Development and Redevelopment
- Good Housekeeping and Pollution Prevention

CATCH BASIN CLEANING

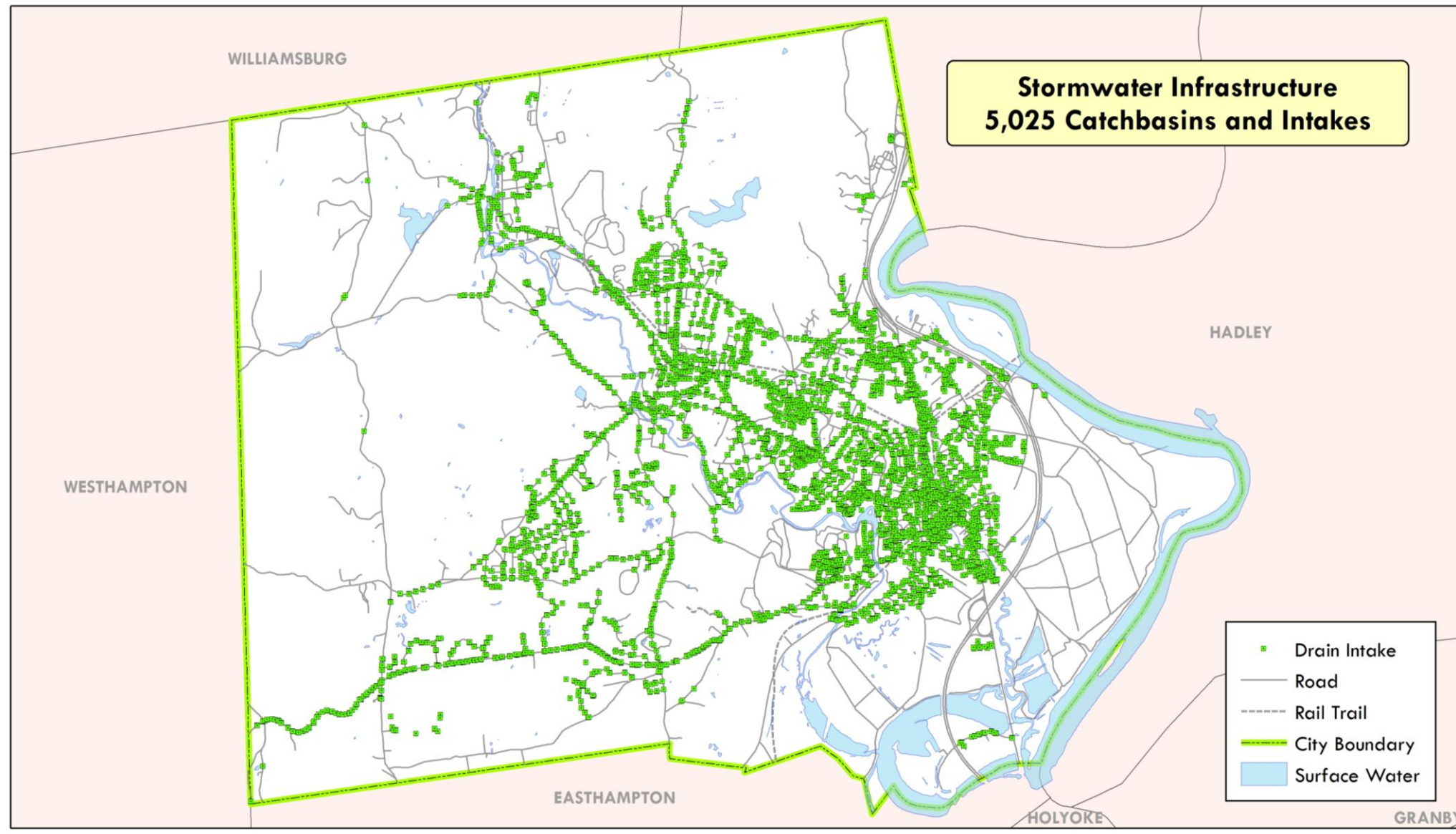
- Over 1,055 catch basins cleaned
- 435 of them measured and inspected for new EPA MS4 Permit



CATCH BASIN LABEL INSTALLATIONS

Installed labels as part of the
public education activities in
compliance with the EPA MS4
Permit

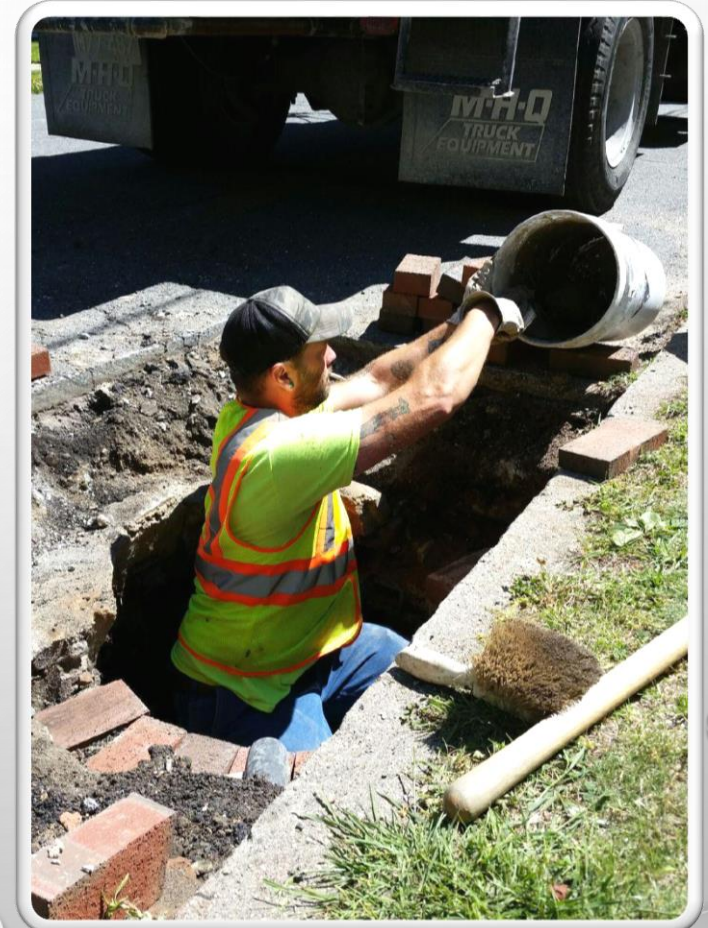


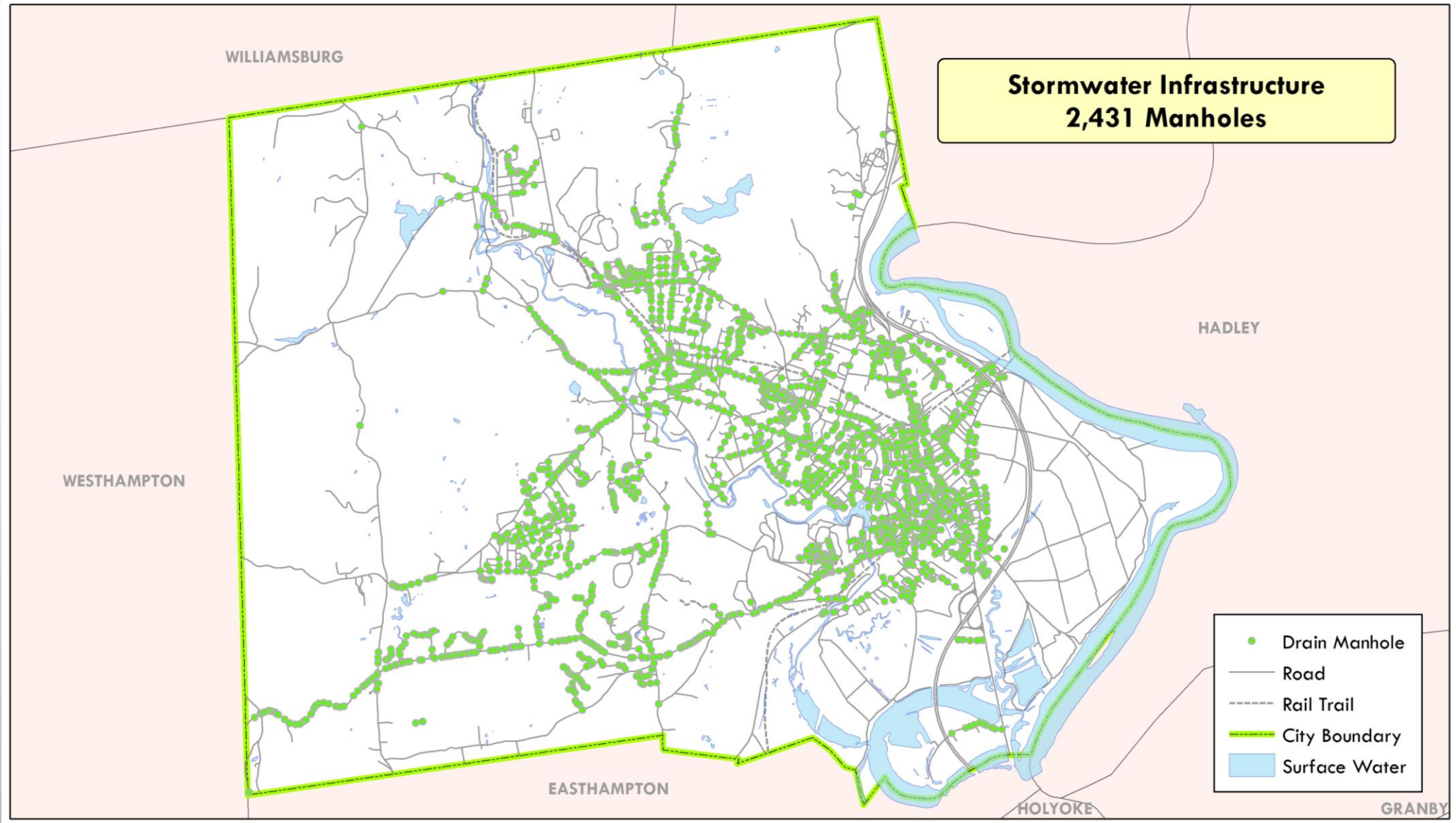


CATCH BASIN & DRAIN MANHOLE COVER REPAIRS/REPLACEMENTS

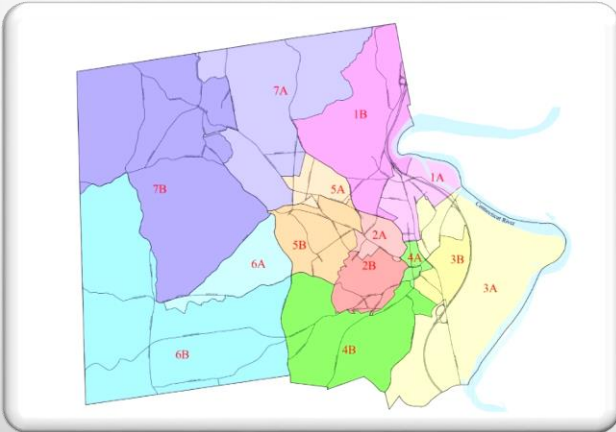


Over 60 catch basin
covers and grates
repaired, reset or
replaced





STREET SWEEPING



All streets once annually –
scheduled by ward



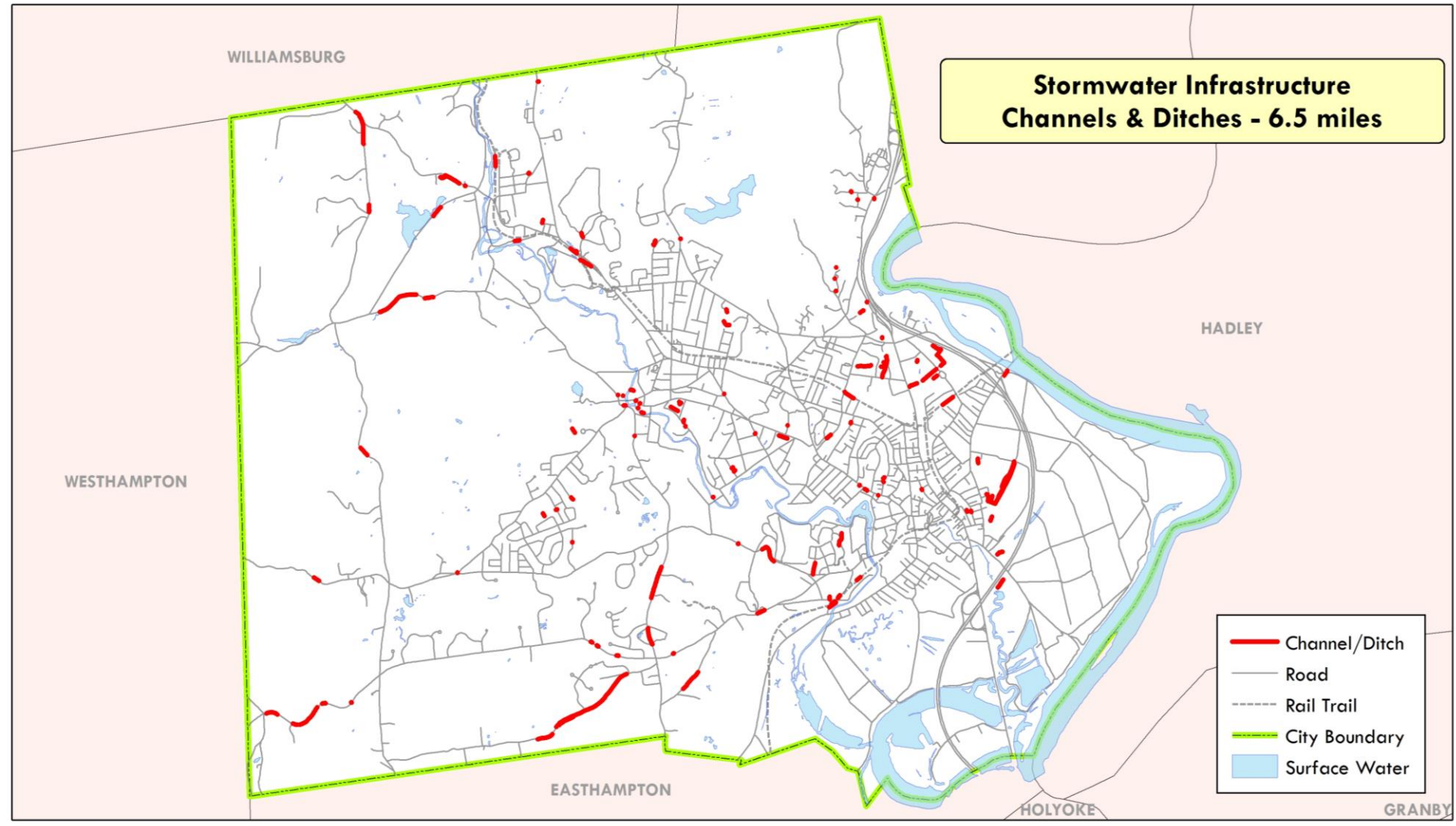
Monthly Sweeping

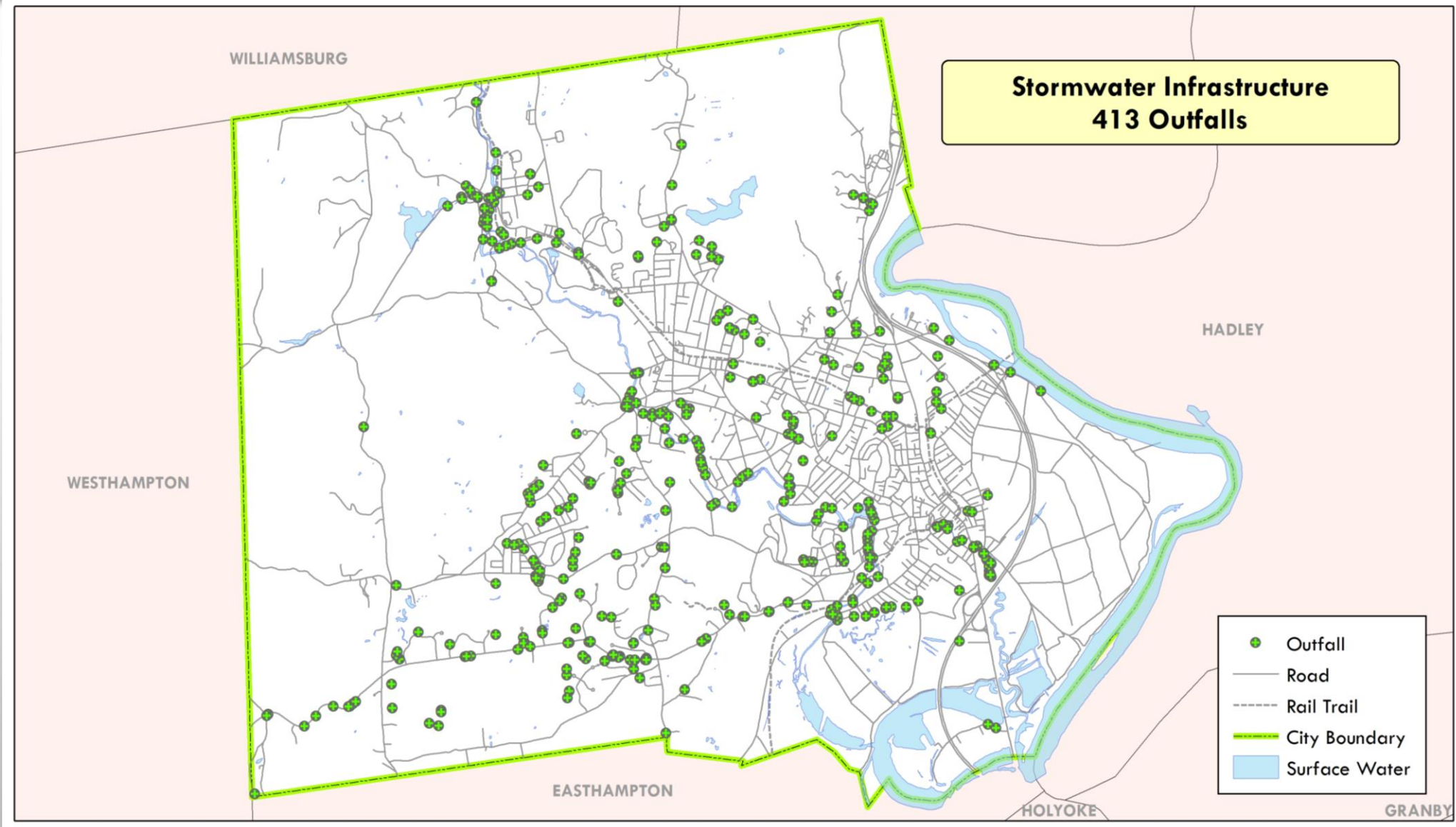
- Florence Center
- King St/Damon Rd/Bridge St
- Glendale Rd
- West Farms Rd
- Downtown Parking Lots
- Leeds Village
- Baystate Village



Central Business District as needed for
special events and twice per month

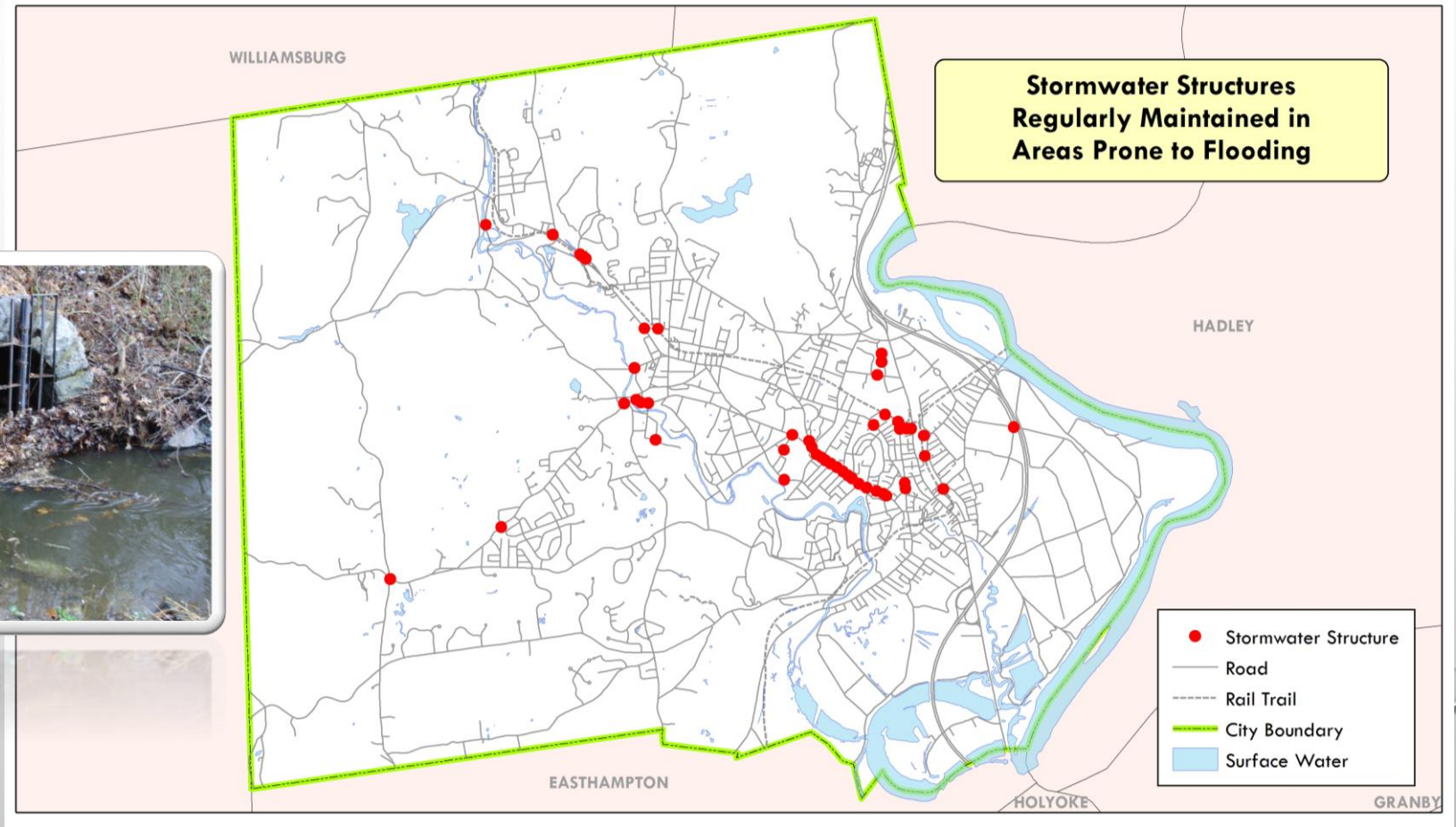
CLEANING OF DRAIN DITCHES

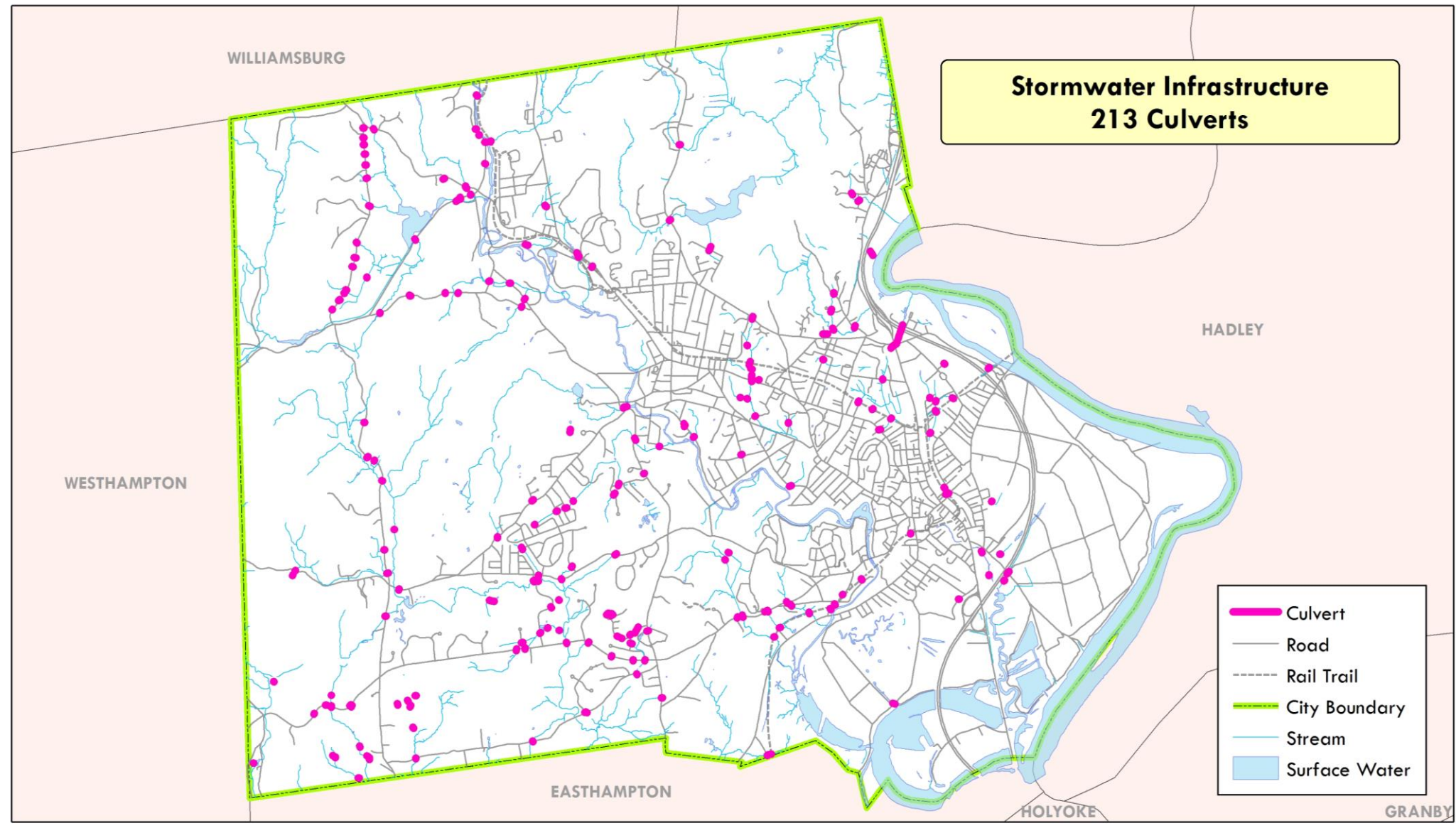




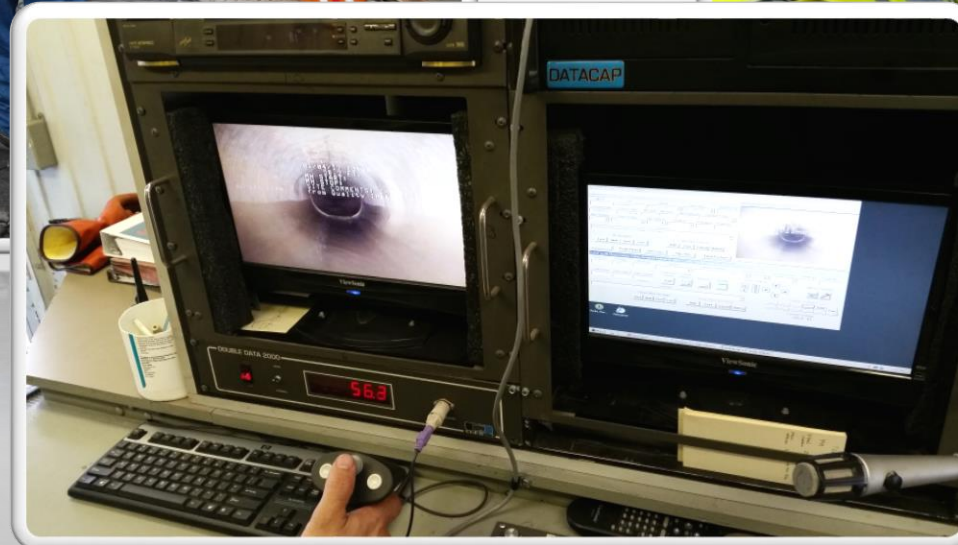
STORM EVENT FLOOD MITIGATION

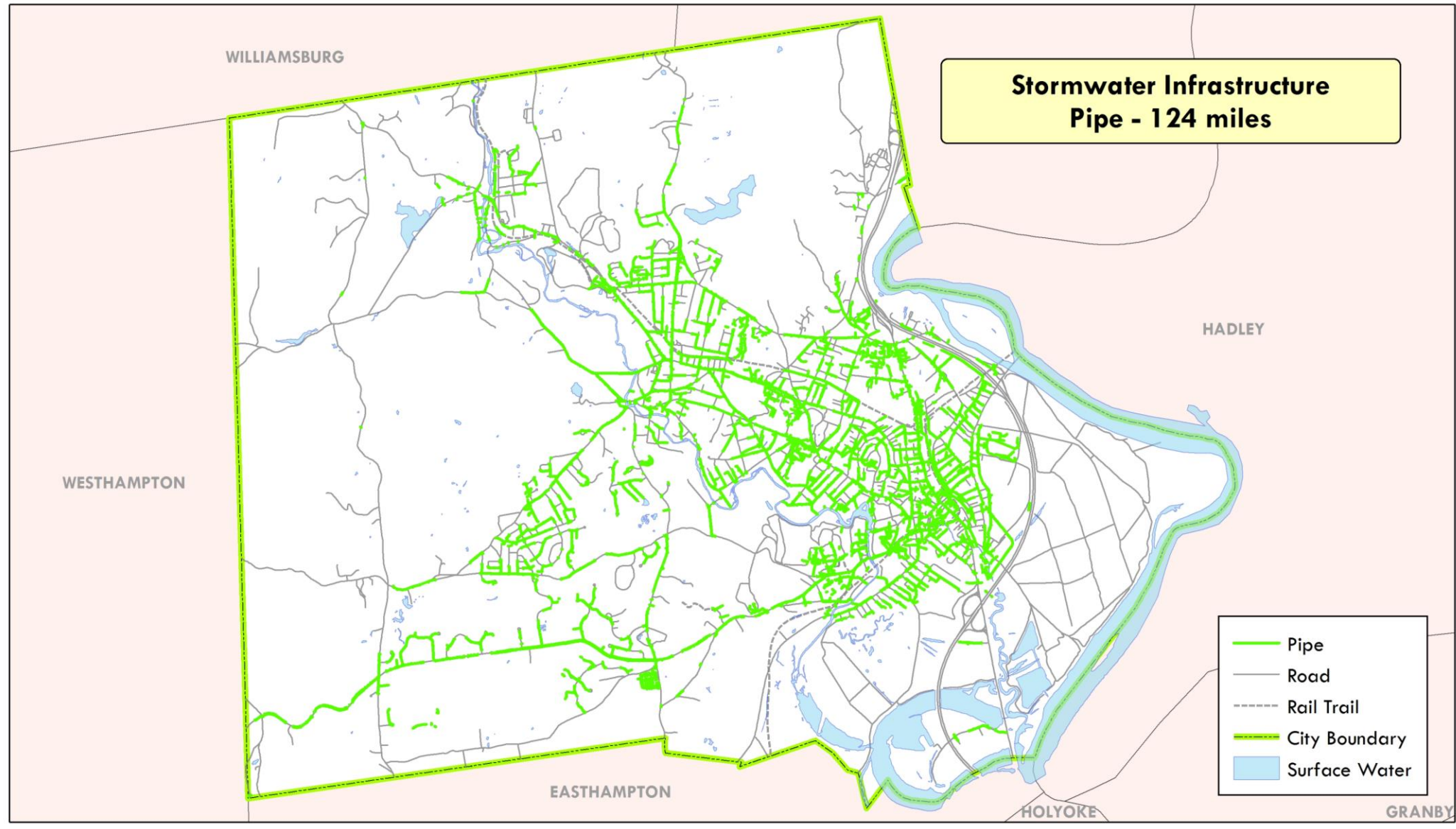
Ongoing removal of leaves, snow and debris in catch basin and culvert grates to mitigate backups and flooding





STORMWATER SYSTEM INSPECTIONS





STORMWATER PIPE REPAIRS



DPW crews complete
pipe repairs as needed

KING STREET BROOK / BARRETT STREET MARSH FLOOD MITIGATION

Weekly inspections of King Street Brook at bike path culvert



Annual sediment basin
clean out and clearing
debris from culvert
grates as needed



Vegetation and debris
removal from brook channel
between Barrett St and culvert
behind CVS



- **STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

Ongoing review and inspection of development projects in compliance with EPA MS4 Permit

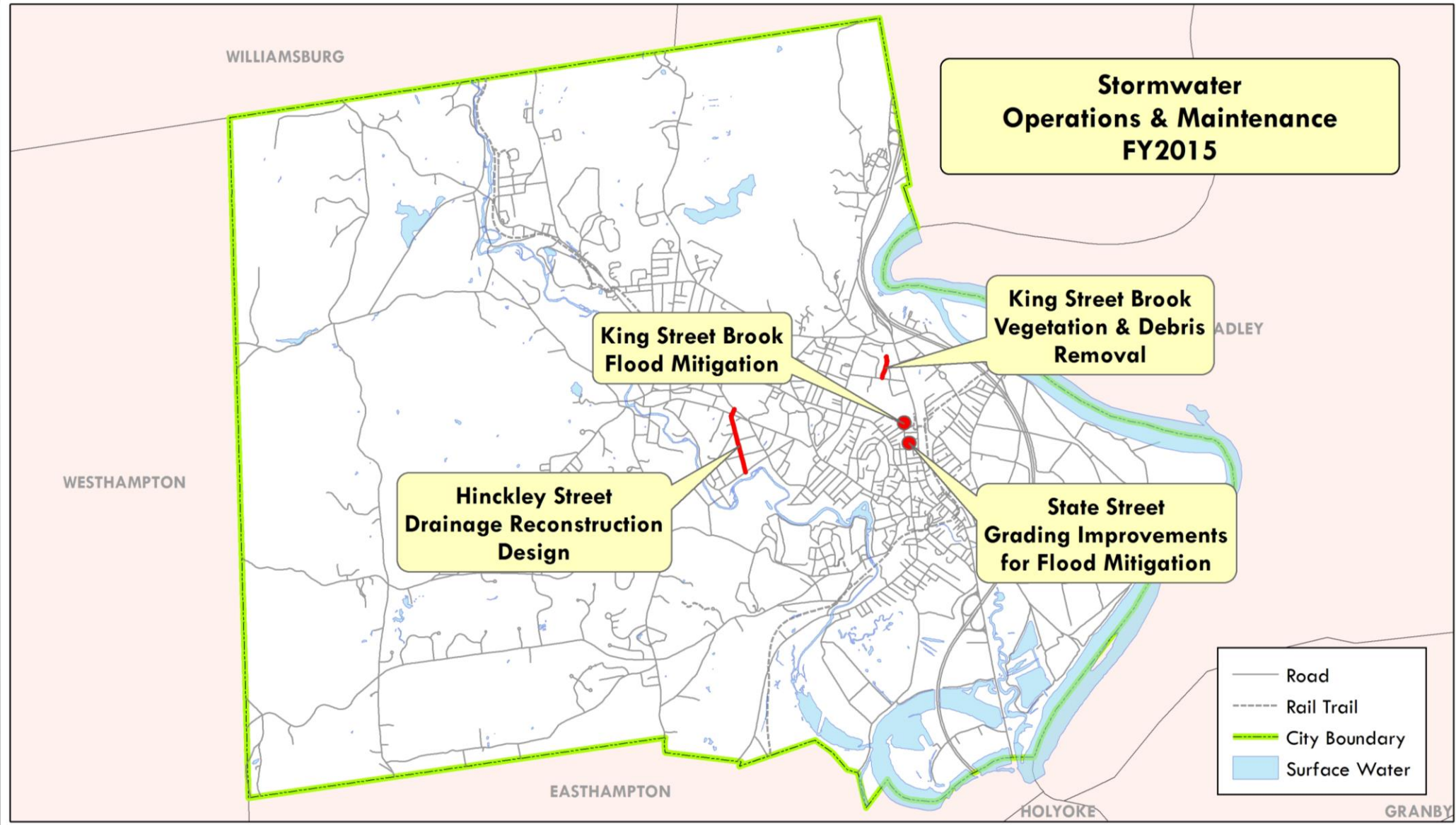


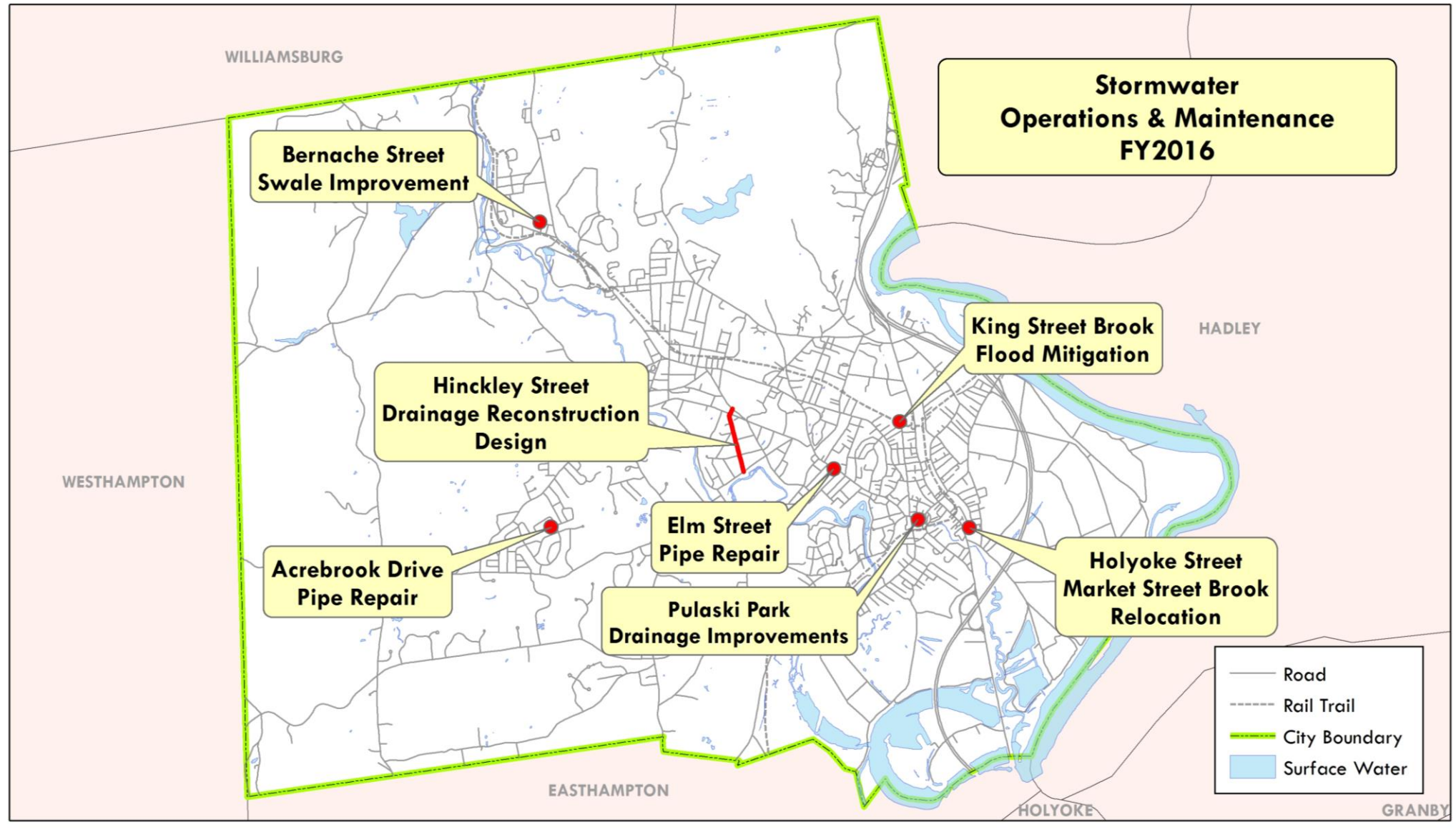
RELOCATION OF THE MARKET STREET BROOK CULVERT

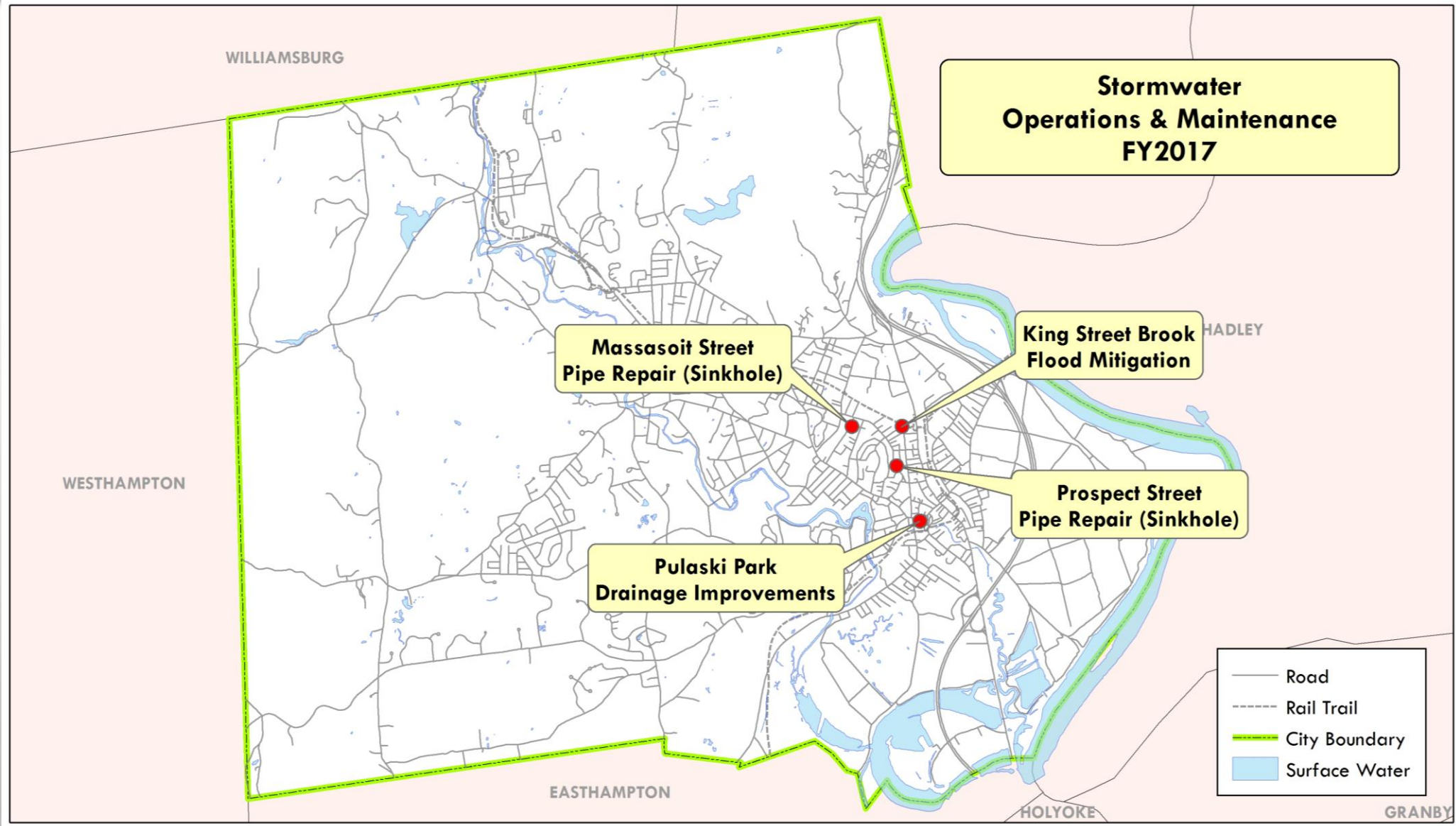


Management and oversight of the design for the reconstruction of a portion of the Market Street Brook drainage conduit









The background is a light gray gradient. In the top-left and bottom-right corners, there are several realistic-looking water droplets of various sizes, some overlapping. The text is centered in the lower half of the image.

FLOOD CONTROL SYSTEM OPERATIONS & MAINTENANCE

FLOOD CONTROL SYSTEM OPERATIONS AND MAINTENANCE



Connecticut River Levees
vegetation maintenance



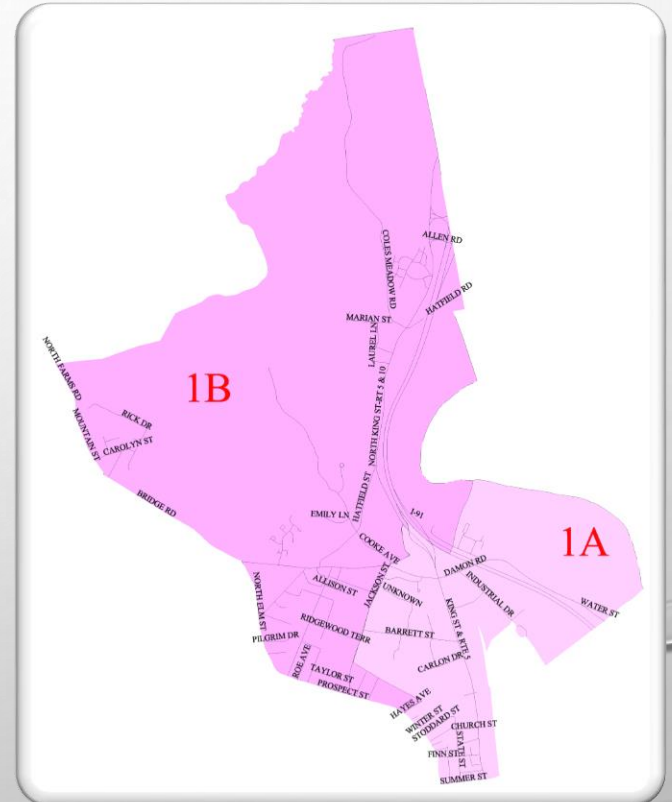
Stop Log
Structure trial
deployment



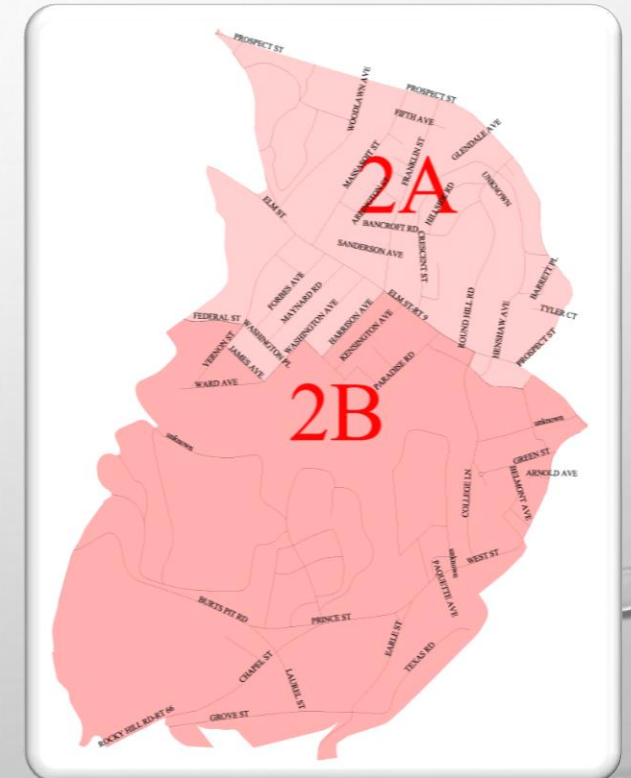
The background of the slide is a light gray gradient. It is decorated with several realistic water droplets of various sizes, some in the top-left corner, some in the top-right, and a cluster in the bottom-right. In the center of the slide, there is a faint, circular watermark logo. The logo features a globe with latitude and longitude lines, and the text "WATER RESOURCES" is visible around the perimeter of the circle.

STORMWATER CAPITAL PROJECTS

WARD 1 KING ST BROOK



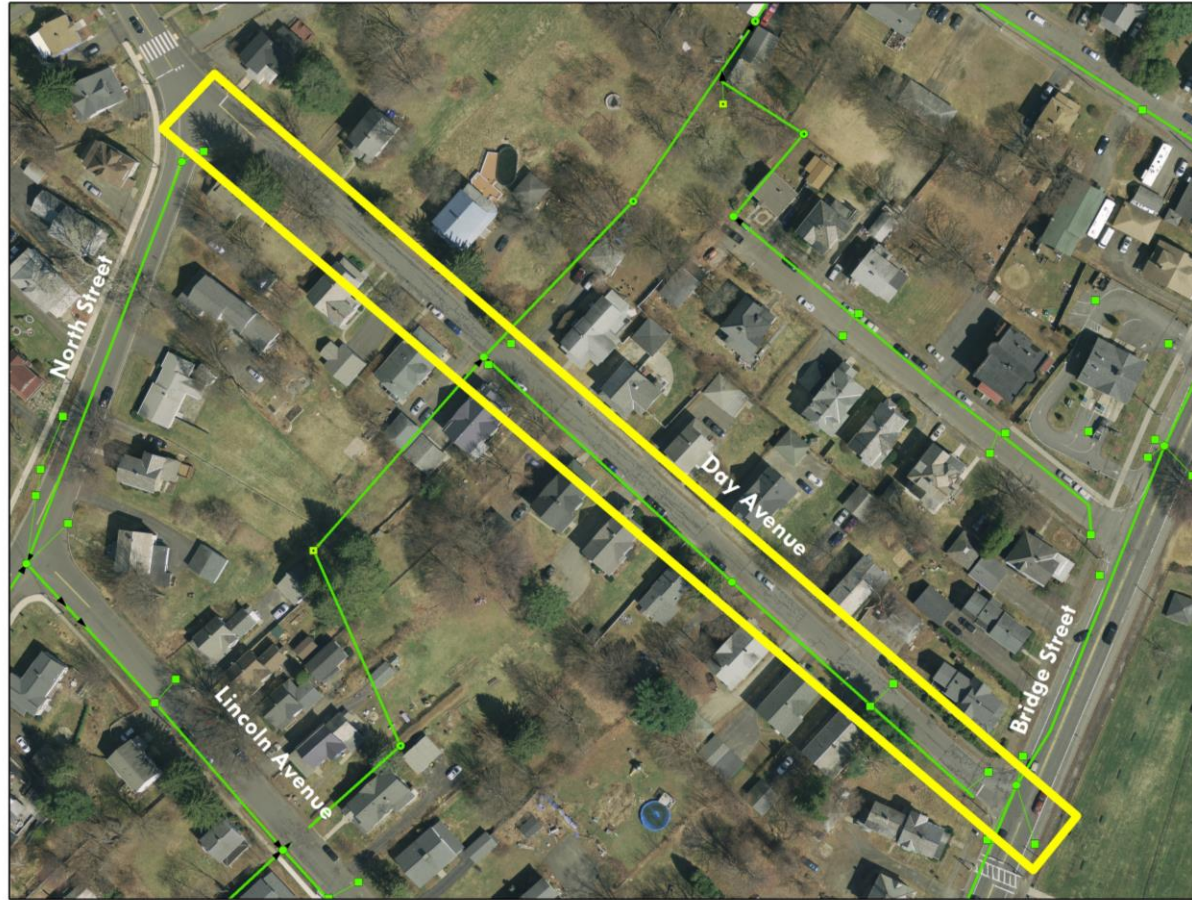
WARD 2 WOODLAWN AVE



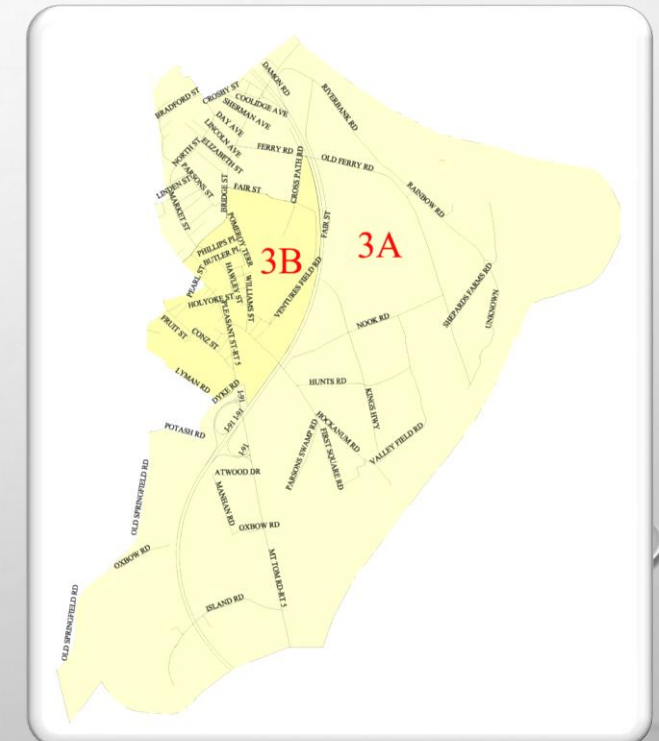
WARD 2

- Burts Pit Rd



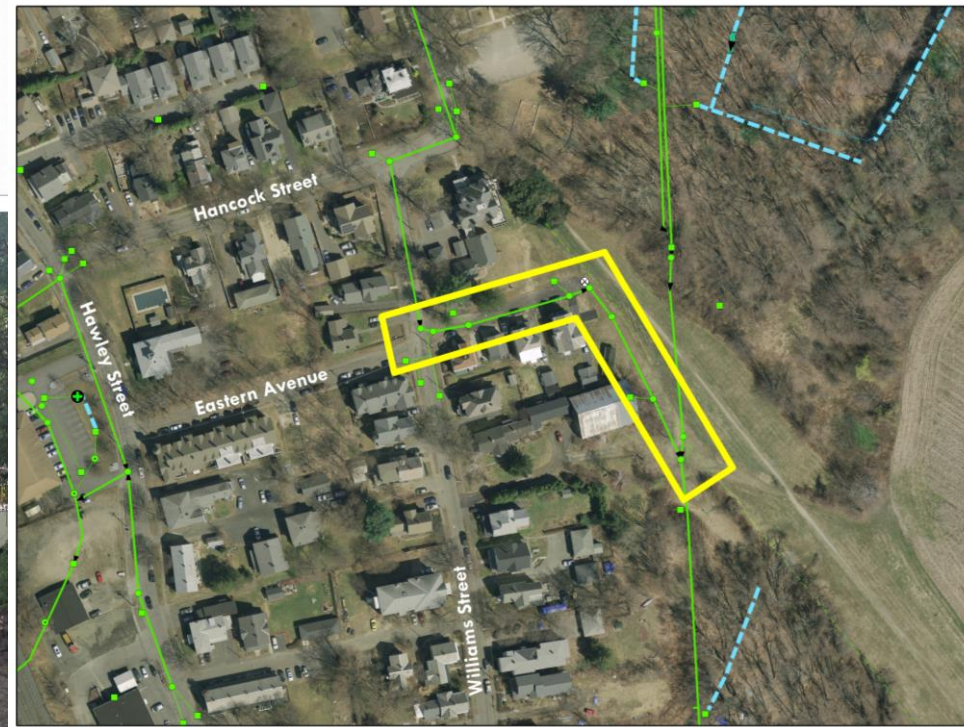


WARD 3 DAY AVE

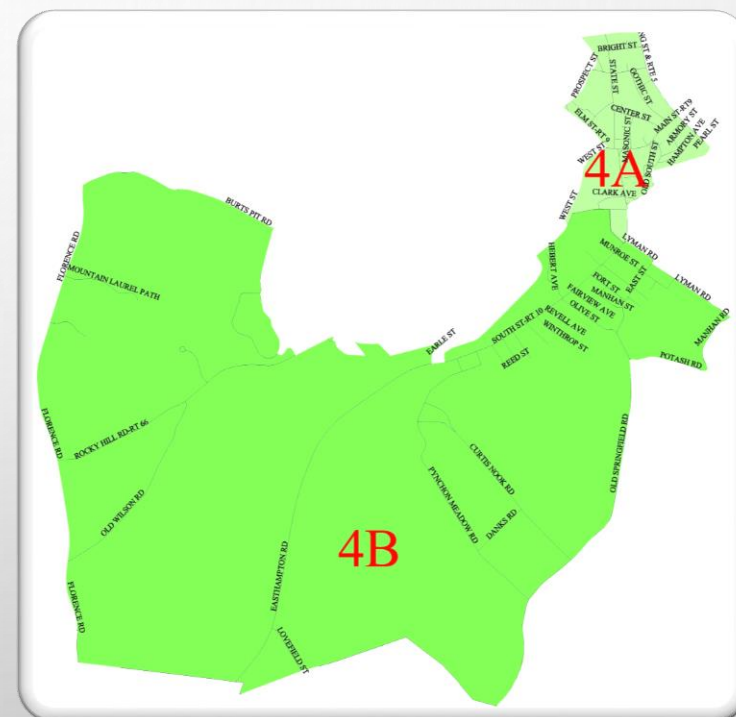


WARD 3

- Eastern Ave

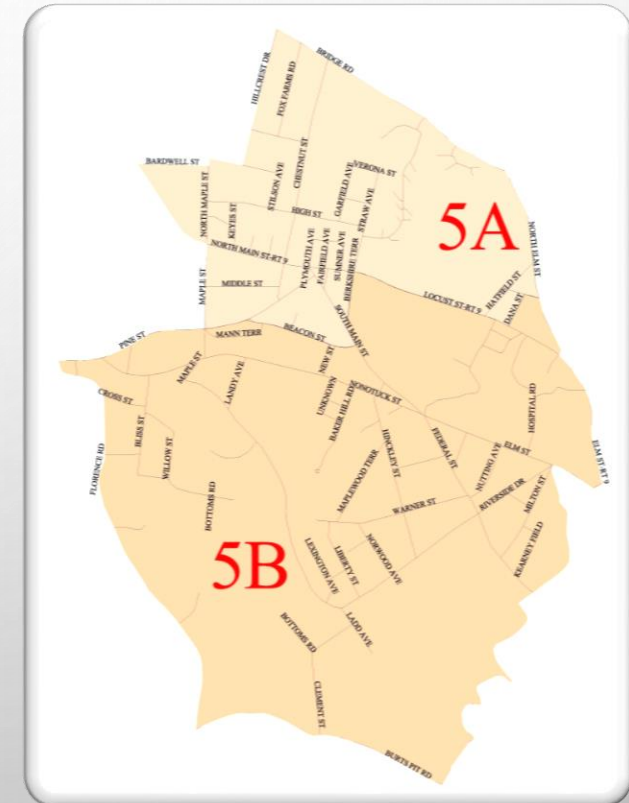


WARD 4 PULASKI PARK





WARD 5 HINCKLEY STREET



WARD 5

- Florence Rd

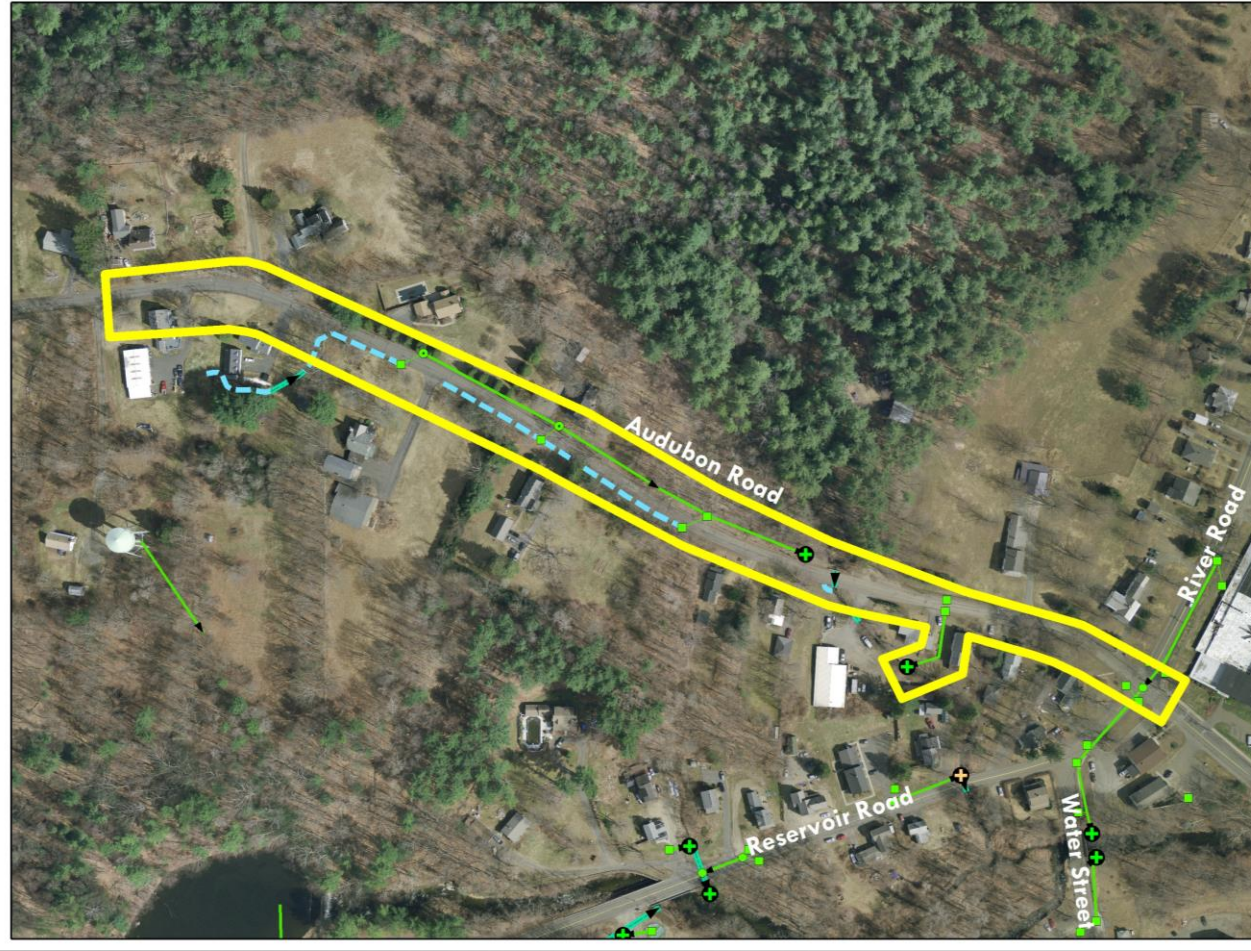


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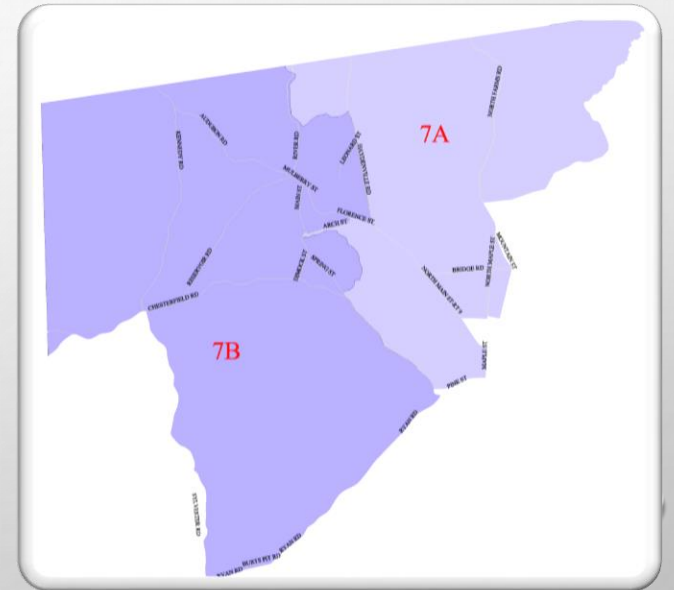
WARD 6

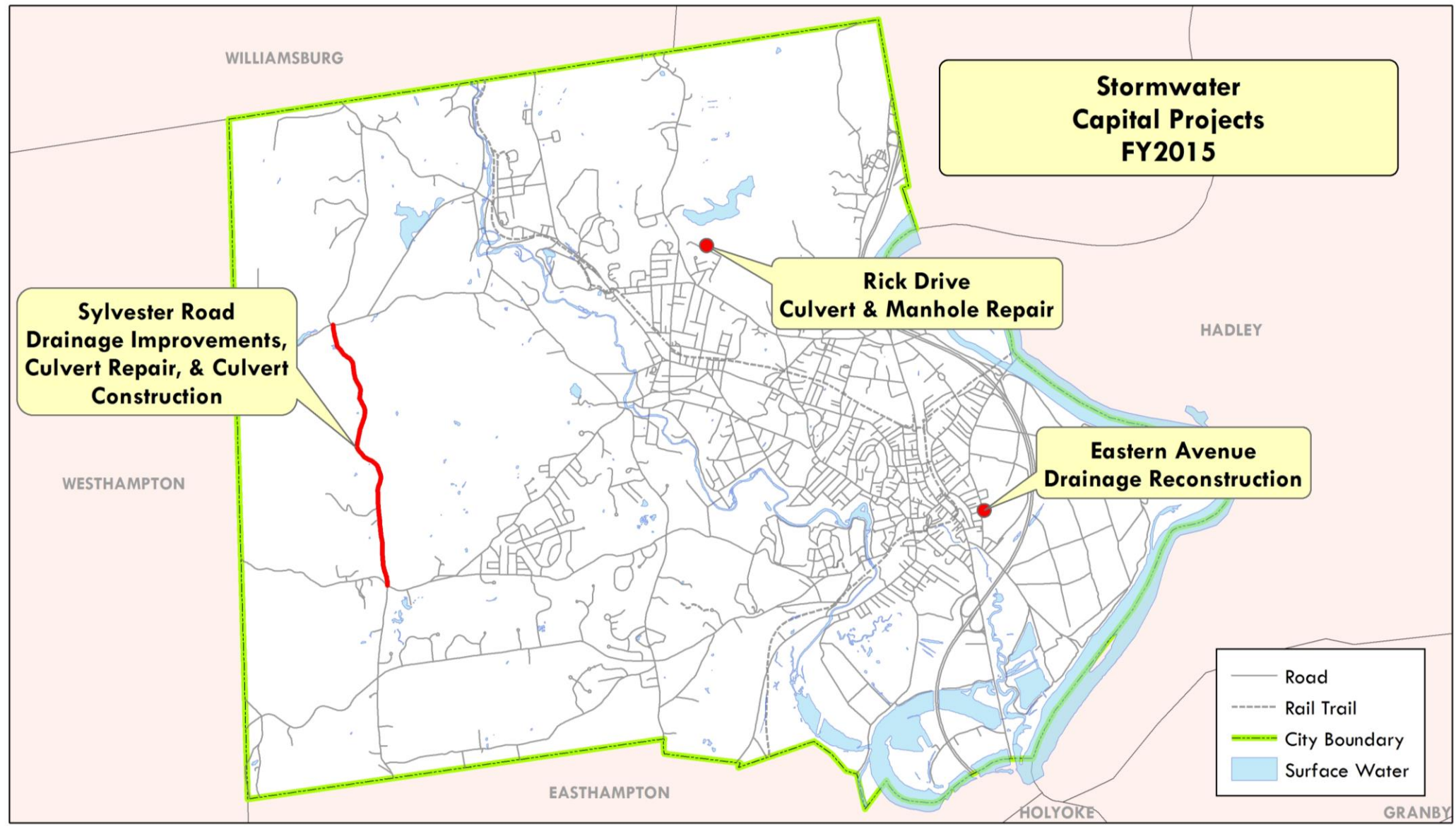
- Florence Rd

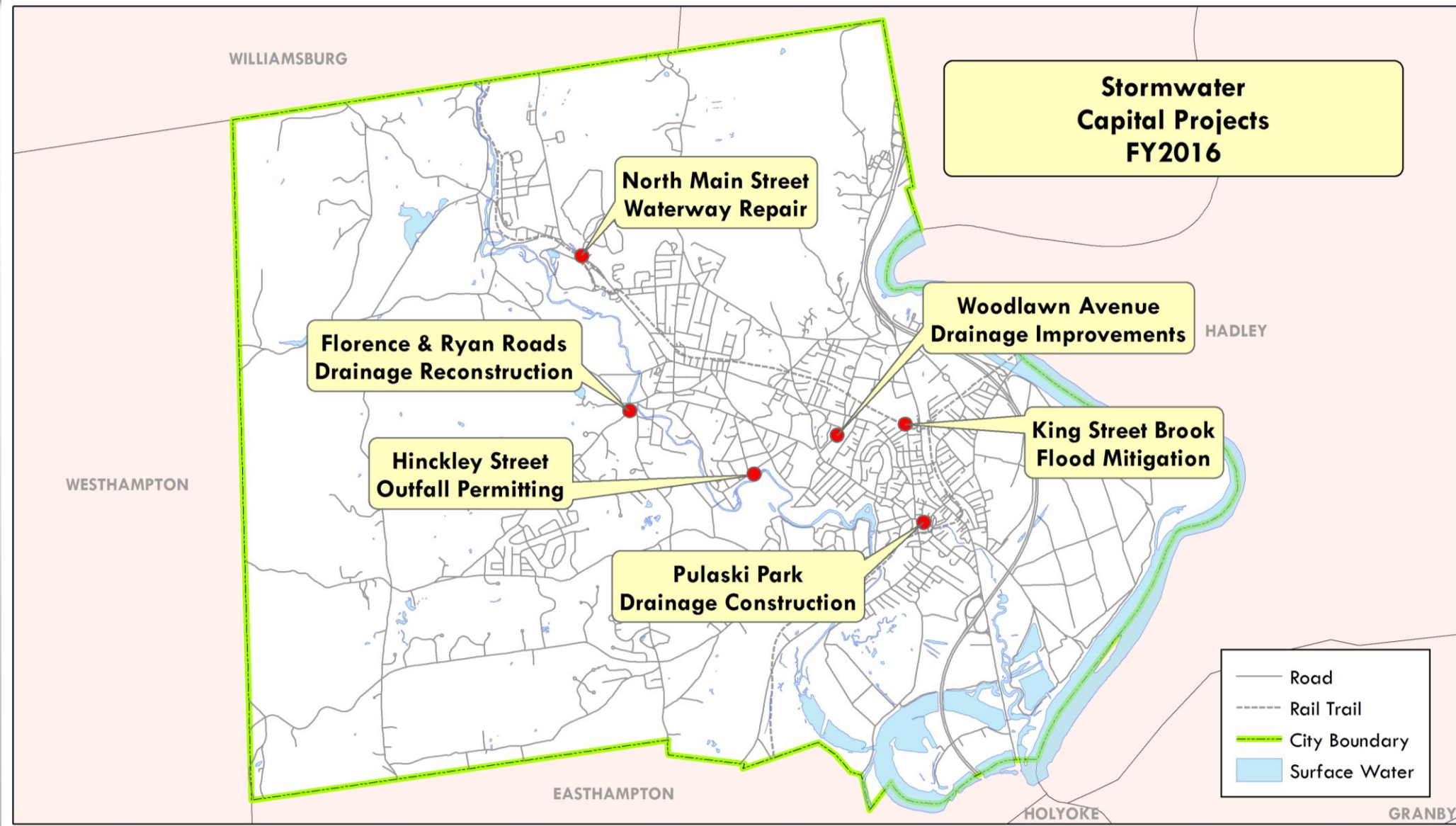


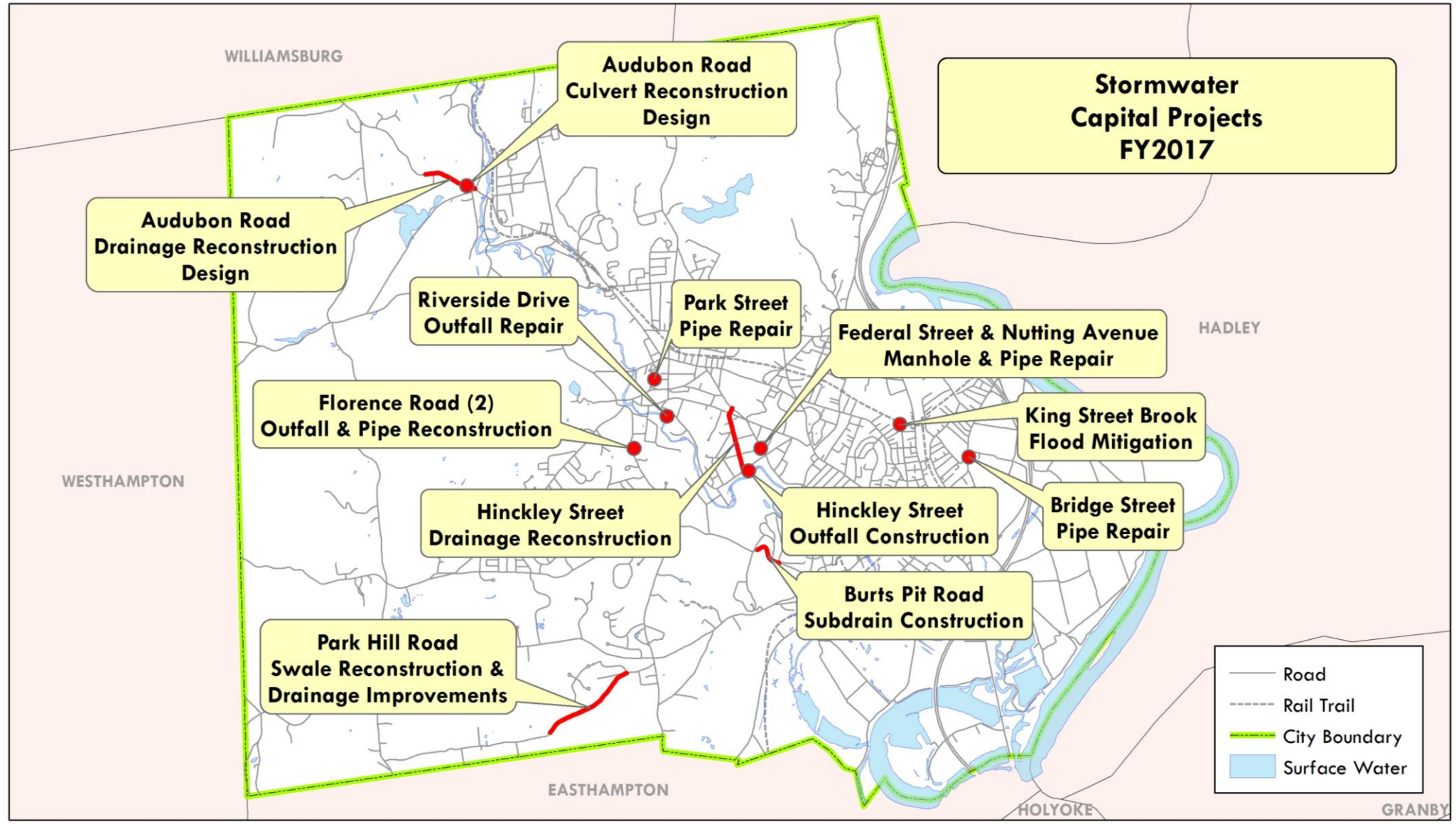


WARD 7 AUDUBON ROAD









The background of the slide is a light gray gradient. In the top-left and bottom-right corners, there are several realistic-looking water droplets of various sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The text is centered on the left side of the slide.

FLOOD CONTROL SYSTEM CAPITAL PROJECTS



**Mill River
Levees and Diversion**

**Smith College Levee
≈ 1,100 LF**

**West Street
Stop Log**

**West Street
Pump Station**

**West Street
Flood Wall**

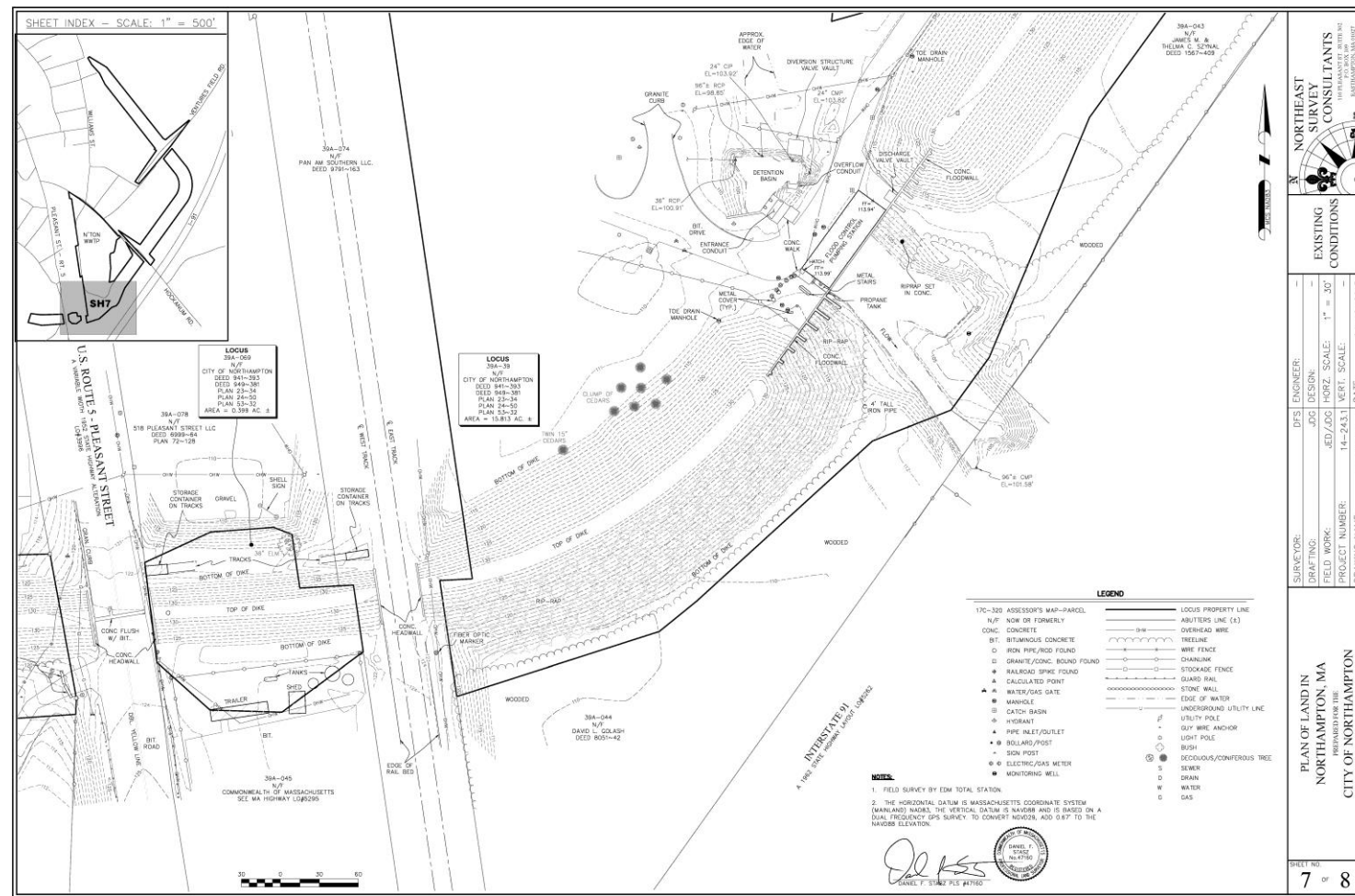
**Mill River Diversion Levee
≈ 1,000 LF**

**Mill River Diversion
≈ 3,000 LF**

**South Street
Drop Structure**



TOPOGRAPHIC AND BOUNDARY SURVEY FOR CONNECTICUT AND MILL RIVER SYSTEMS



LEVEE SYSTEM ASSESSMENT

This work was performed in response to various issues previously noted by the U.S. Army Corps of Engineers (USACE)

- Assessment of observed encroachments to the Flood Control System and recommended alterations to USACE
- Review of freeboard elevations along the levees and floodwalls
- West St pumping station risk analysis relating to fuel type and storage capacity vs. consequences of loss of use of the pumping station
- Inspection of toe drain systems along the Ct and Mill river Flood Control systems
- Phase I dam inspection/evaluation of the South St Drop Structure in accordance with DCR requirements
- Developed a supplement to the Flood Control System O&M for the South Street Drop Structure
- Inspection and evaluation of the Oxbow Bridge and alternative analysis

CONNECTICUT RIVER LEVEE REPAIR PROJECT



Vegetation Removal

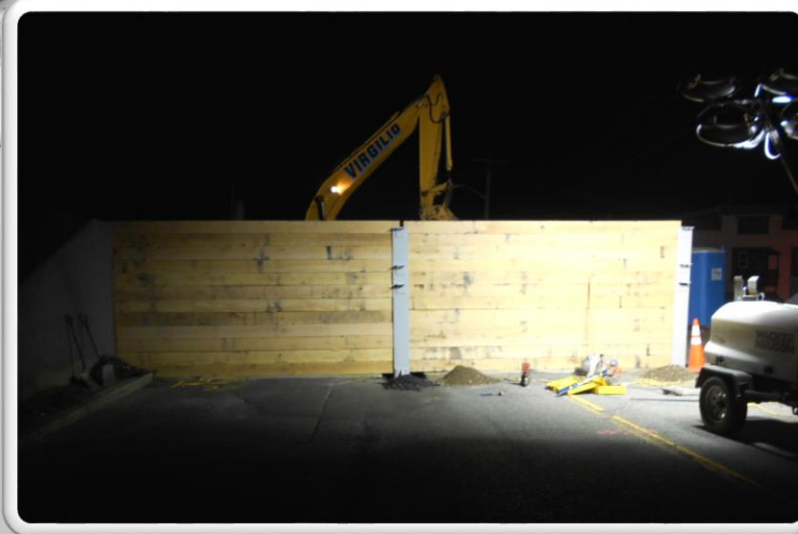


Floodwall Repairs &
Crown Restoration

CONNECTICUT RIVER STOP LOG STRUCTURE EVALUATION & IMPROVEMENTS PROJECTS



Restored
functionality of
Stop Logs



STOP LOG STORAGE IMPROVEMENTS



STORMWATER & FLOOD CONTROL ANTICIPATED PROJECTS

- Catch Basin Material Dewatering Facility at DPW
- Bridge St neighborhood drainage improvements
- Oxbow Bridge Short Range Stabilization
- Evaluation of the Northampton Flood Control System Pump Station

